REMARKS

Claims 1-21 continue to be the pending claims in the application. Reconsideration of the application in light of the remarks which follow is respectfully requested.

The Examiner has withdrawn the previous rejections of claims 1-21 under 35 U.S.C. § 103(a) but has raised new rejections discussed below.

The Examiner has rejected claims 1-21 under 35 U.S.C. § 103(a) as being unpatentable over Ahluwalia (US 5,965,257) in view of Langer (US 4,600,634) and GB 2167060 (GB '060) or Dugan (US 4,994,317) or Dombeck (US 6,228,497).

The Examiner asserts that Ahluwalia discloses a structural article comprising a substrate having an ionic charge which is coated with a coating having essentially the same ionic charge comprising a binder material and a filler material. The Examiner alleges that because the binder comprises Hycar 2679, which contains synthetic soap, Ahluwalia teaches a surfactant component and because a surfactant is present, so also is surfactant-generated microcells.

The Examiner also states that Langer discloses a flexible sheet made of fiber glass and acrylic binder that includes an aluminum foil backing.

As applicants have previously asserted, claim 1 and claims dependent thereon should be deemed nonobvious in view of Ahluwalia '257 and Langer because claim 1, as amended, covers a composite material which does not include a substrate.

If a person of ordinary skill in the art were motivated to increase the strength and durability of a structural article, he or she would not omit an element — the substrate — while retaining the element's function. See, *In re Edge*, 359 F.2d 896, 149 U.S.P.Q. 556 (CCPA 1966) cited at M.P.E.P. Section 2144.04, page 2100-148.

Claim 1 recites "a composite material consisting essentially of (a) a first layer,

comprising a surfactant component, surfactant-generated microcells and a binder component, and (b) a second layer comprising a metallic component adhered to the first layer. Accordingly, claim 1 does not include a substrate.

In the rejection, the Examiner rejects all the claims, including claim 1, based on Ahluwalia in view of Langer and GB '060 or Dugan or Dombeck. The Examiner looks to GB '060, Dugan and Dombeck for the teaching of clay in fire resistant materials. The Examiner states that "clay fillers are frequently added to inorganic fiber products to improve their fire resistance" and that "it would have been obvious to one having ordinary skill in the art to have added the clay filler of GB '060, Dugan or Dombeck to the composite of Ahluwalia Langer, motivated by the desire to create a substrate that has increased flame resistance."

Applicants disagree. The invention described in Ahluwalia '257 is "a structural article made by coating a substrate having an ionic charge with a coating having essentially the same ionic charge. The coating consists essentially of a filler material and a binder material." Col. 1, line 66 to col. 2, line 3. The filler is selected from the group consisting of fly ash, charged calcium carbonate, ceramic microspheres and mixtures thereof. Abstract, col. 2, line 21 to col. 3, line 4. The coating does not bleed through the substrate. Col. 2, lines 3 to 8. Nothing in Ahluwalia '257 indicates that clay may be included among filler components to produce a coating that does not bleed through a substrate. Indeed, as Applicants have noted in their previous response, Ahluwalia distinguished his described and claimed invention from prior art laminates that featured clay as a filler in the construction of planar facing sheets. The Ahluwalia '257 patent issued on October 12, 1999.

The rejection is also based on Langer which discloses a sheet material comprising an inorganic fiber, such as fiberglass; a binder, such as acrylic resin; and an inorganic endothermic filler, such as alumina trihydrate. Abstract. The "endothermic filler

occupies the interstices between the fibers." Col. 4, lines 2 3. Clay is not listed among the fillers, but it is mentioned as an inorganic binder, on which the Langer "compositions do not rely." Col. 2, lines 53-54. Alternative embodiments feature the addition of a backing to the sheet material to "give added strength." *Id.*, lines 8-27. The backing materials may be aluminum foil or fabric scrim. *Id.*

The Examiner contends that it "would have been obvious to one having ordinary skill in the art to have added Langer's aluminum sheet to one or both sides of the coated substrate of Ahluwalia, motivated by the desire to create a structural article with increased strength and durability." The Applicants respectfully submit that, whether it would have been obvious to add Langer's aluminum sheet to the coated substrate of Ahluwalia '257 is irrelevant to the issue of patentability of the instant claimed invention. As noted above, in claim 1 of the present application, the metallic component is adhered to a first layer that does not include a substrate, not to the coated substrate of Ahluwalia '257. Moreover, in claim 2 of the instant application, the metallic component is adhered to a coated substrate comprising a surfactant component, surfactant-generated microcells, a filler component comprising clay and a binder component. As noted above, the Ahluwalia '257 coated substrate does not include clay. Indeed, Ahluwalia '257 distinguishes the inventive products described therein from prior art Blanpied facers which include clay to decrease the porosity in glass fiber sheets. Langer also employs filler, but not clay, to occupy "the interstices between fibers," *i.e.* to enter the substrate. Langer teaches that clay is not useful as a binder component.

Furthermore, Applicants assert that none of the references cited by the Examiner (GB '060, Dugan or Dombeck) teach or suggest that clay can be used to prepare a coating that does not bleed through the substrate, as required Ahluwalia and by claim 2 of the instant application and claims dependent thereon.

In fact, GB '060 indicates that the material is comprised of synthetic fibers,

clay and binder and that all these components (including the synthetic fibers) are "suspended in a fluid, such as gases or liquids, followed by separation on a screen, the fluid, or a portion thereof passing through said screen to leave a mat of solids which is subsequently pressed and/or dries to produce the product, and/or cure or set the binder." Page 3, lines 6-11. Nothing in GB '060 suggests that clay can be used to make a coating that does not bleed through the substrate.

Dugan relates to a flame barrier fabric comprising a textile fabric substrate, a silicone polymer coating carried by the surface of the textile fabric, and a reflective flame durable paint coating carried by the silicone polymer coating. Abstract. The silicone polymer coating may include flame retardant fillers, such as hydrated clay. Col. 3, lines 58-65. The silicone layer "fills the voids between the yarns," *i.e.*, enters the interstices between the fibers of the textile fabric substrate. Col. 4, lines 11-12.

Dombeck relates to a high temperature resistant glass fiber composition that consists of glass fibers that are coated with a halogenated resin latex binder, a calcium carbonate material and a cationic flocculent. Abstract. Dombeck indicates that the latex binder is anionically stabilized and that the cationic flocculent is added to act as a coupling agent for the latex binder and calcium carbonate to the glass fibers. The high temperature resistant glass fibers are made by forming an aqueous dispersion including the glass fibers, binder, calcium carbonate and cationic flocculent (*i.e.*, a positively charged coating). The aqueous dispersion is then drained on a wire screen for dewatering to form a mat that is then dried by heated air. Col. 2, lines 64-67 through col. 3, lines 1-21. Dombeck states that other fillers may also be added, such as clay. Col. 5, line 28. Dombeck further states that the glass fibers are negatively charged and that "the excess positive charge on the flocculent causes the anionically stabilized, halogenated latex binder and the calcium carbonate or calcium magnesium carbonate to be deposited on the surface of the glass fibers." Col. 4, lines 29-36.

Accordingly, Dombeck relates to a coating that has the opposite charge as the glass fibers and teaches away from Ahluwalia's coating that has essentially the same charge as the substrate. Therefore, the skilled artisan looking to Dombeck and Ahluwalia would not be motivated to combine the teachings of these references. Furthermore, Dombeck teaches that the calcium carbonate provides the heat resistance. Col. 4, lines 38-43.

The Examiner's attention is invited to the USPTO Examination Guidelines for Determining Obviousness, effective October 10, 2007. 72 Fed. Reg. 57,529 provides, *inter alia*, "Note that combining known prior art elements is not sufficient to render the claimed invention obvious if the results would not have been predictable to one of ordinary skill in the art." Nothing in Ahluwalia, Langer, GB '060, Dugan or Dombeck suggests adhering a metallic component to the composite materials of claims 1 and/or 2 and claims dependent thereon. Furthermore, nothing in any of the cited references teaches or suggests the inclusion of clay among filler components to produce a coating that does not bleed through a substrate. Therefore, Applicants respectfully request that the rejection of claim 1-21 under 35 U.S.C. § 103(a) as unpatentable over Ahluwalia in view of Langer and GB '060 or Dugan or Dombeck be withdrawn.

Conclusion

Based on the foregoing, allowance of the claims is earnestly solicited. Please send any further correspondence relating to this application to the undersigned attorney at the address below.

Applicants believe no fee is due in connection with this communication. However, should any fee be due in connection with this communication, the Commissioner is authorized to charge any such fee to Deposit Account No. 06-1205.

Applicants' undersigned attorney may be reached in our New York office by

telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

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